

4THE CM5A/CM5B INDOOR COIL

To complete your cooling or heating system, the model CM5A or CM5B Coil is installed inside your Evcon/Coleman, Nordyne/Miller/Intertherm or AirPro gas or electric downflow furnace. Both coils are uncased, and designed for installation within the manufactured home furnace casing or inside a factory-installed plenum. These indoor coils are designed to be used in conjunction with blower kits and other accessories. The CM5A and CM5B coils are designed for quick and easy installation by a qualified service technician.

The CM5A comes with factory-installed mechanical connections. The CM5B comes with factory-installed sweat connections. Both coils utilize a Check-Flo-Rater® piston for refrigerant flow control. Both coils can be used in cooling-only applications or as part of a heat pump system.

When heating in conjunction with a heat pump, the outdoor heat pump unit recovers heat from the outdoor air, and transmits it to the CM5A or the CM5B indoor coil for distribution to the living space. The CM5A and CM5B coils are not activated when heating in conjunction with a furnace without a heat pump in the system.

Built-in drainage assembly ensures leak-free condensate removal. Periodic cleaning of filter and drainage sections is recommended to avoid possible sediment blockage. The A-shape design of the coil provides maximum cooling-heating transfer surface and ease of handling at installation. Four coil sizes are available from 024 through 048, covering a wide range of cooling-heating capacities to meet varying manufactured home requirements.

THE KMABA BLOWER

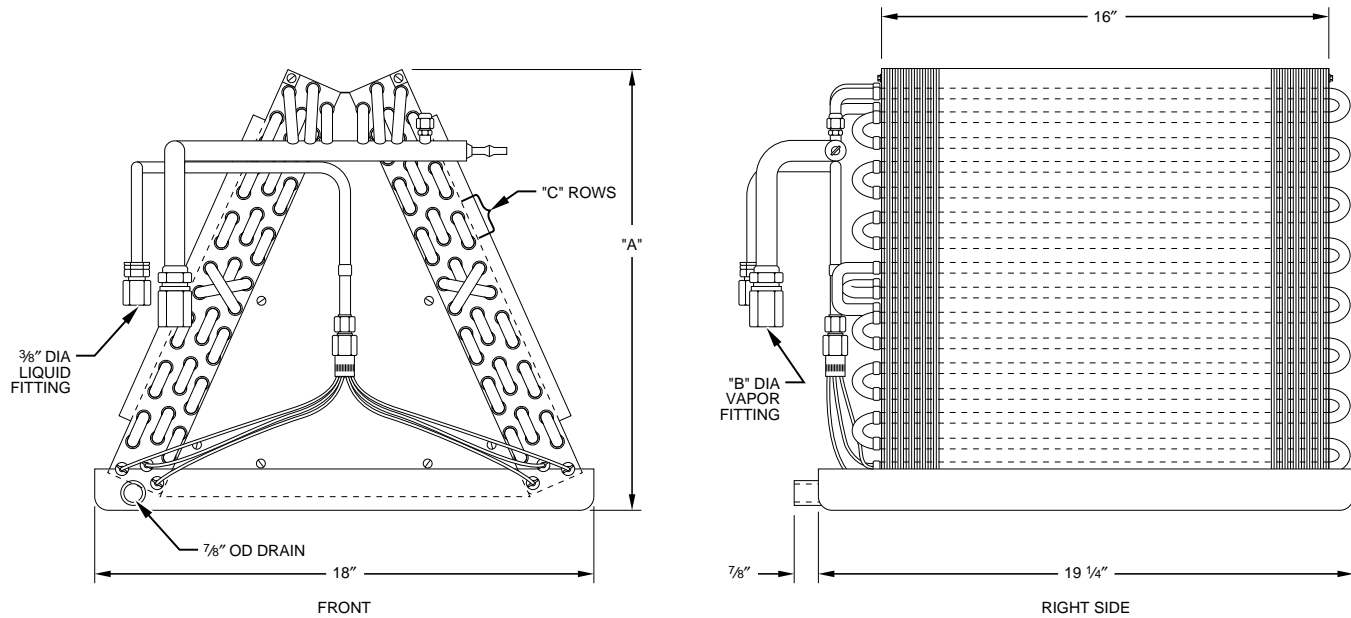
KMABA Blower Kits and Accessories are designed and built to meet the needs of the manufactured housing market. The kits are used to upgrade Nordyne and Evcon gas and electric furnaces (see note). For cooling and heat pump duty, kits available include blowers for up to 4 tons of air conditioning, control boxes, insulation kits, filter kits, and evaporator coil shelves.

Blower kits for gas furnaces are shipped without controls. Order the control box from accessory usage chart. Blower kits for electric furnaces are shipped with or without controls. See accessory usage chart for details. All control box kits are designed to operate with a minimum 4-wire thermostat.

Quick connect wire harnesses are shipped with the appropriate blower kit or control box for ease of installation. Sheet metal adapter plates also are included with the blower kits that are needed to adapt the blower with the furnace.

NOTE: Intertherm, Miller, Coleman, and AirPro brands.

CM5A DIMENSIONS



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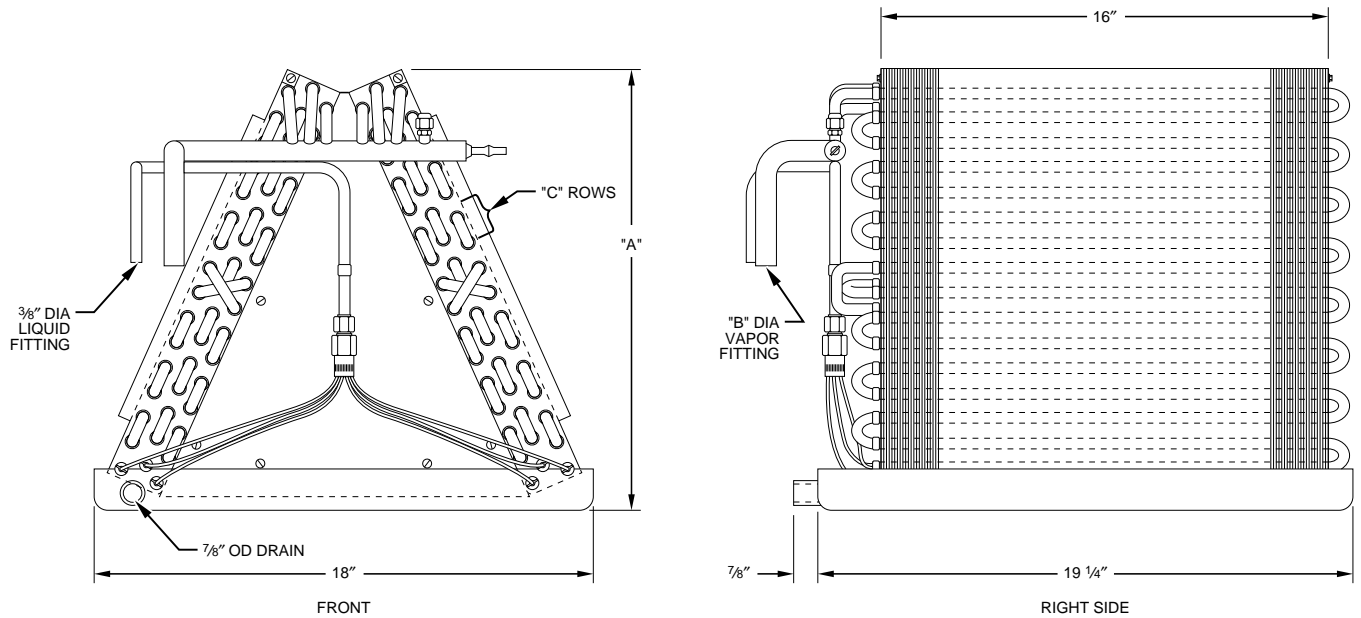
UNIT SIZE	SERIES	UNIT DIMENSIONS (In.)		NUMBER OF ROWS	SHIPPING WEIGHT (Lb)
		A	B		
024	A	14	5/8	3	30
036	A	16	3/4	3	32
042	A	18	3/4	3	35
048	A	18	3/4	4	37

NOTE: Series designation is the 14th position of unit model number.

CM5A SPECIFICATIONS

UNIT SIZE-SERIES	024-A	036-A	042-A	048-A
Operating Weight (Lb)	21	23	26	28
REFRIGERANT				
Control	Check-Flo-Rater® Piston			
COIL				
Type	Uncased A-Type with Aluminum Fins			
Rows-Fins/In.	3–15	3–15	3–15	4–13
Face Area (Sq Ft)	3.11	3.56	4.00	3.56
Nominal CFM	800	1200	1200	1200
CONNECTIONS				
Type	Mechanical			
Vapor (In. ID)	5/8	3/4		
Liquid (In. ID)	3/8			
OPTIONAL EQUIPMENT				
TXV (Hard Shutoff)	KSATX0801HSO		KSATX0901HSO	

CM5B DIMENSIONS



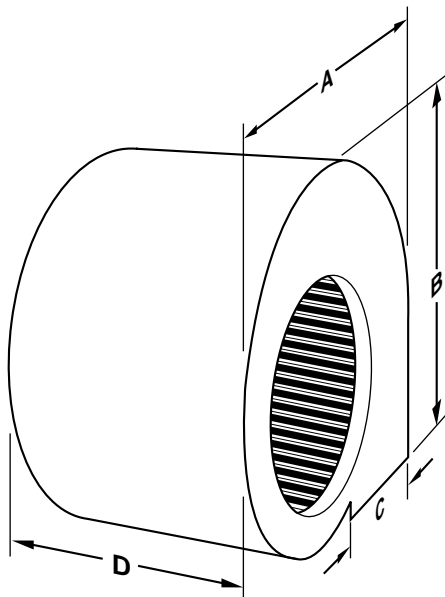
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UNIT SIZE	SERIES	UNIT DIMENSIONS (In.)		NUMBER OF ROWS	SHIPPING WEIGHT (Lb)
		A	B		
024	A	14	5/8	3	30
036	A	16	3/4	3	32
042	A	18	7/8	3	35
048	A	18	7/8	4	37

NOTE: Series designation is the 14th position of unit model number.

CM5B SPECIFICATIONS

UNIT SIZE-SERIES	024-A	036-A	042-A	048-A
Operating Weight (Lb)	21	23	26	28
REFRIGERANT				
Control	Check-Flo-Rater® Piston			
COIL				
Type	Uncased A-Type with Aluminum Fins			
Rows—Fins/In.	3–15	3–15	3–15	4–13
Face Area (Sq Ft)	3.11	3.56	4.00	3.56
Nominal CFM	800	1200	1200	1200
CONNECTIONS				
Type	Sweat			
Vapor (In. ID)	5/8	3/4	7/8	
Liquid (In. ID)	3/8			
OPTIONAL EQUIPMENT				
TXV (Hard Shutoff)	KSATX0801HSO		KSATX0901HSO	



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BLOWER MODEL	A	B	C	D
KMABA01013TG	17-3/4	15-1/4	7-3/8	9-5/8
KMABA02014TG			7-1/2	10
KMABA03013TE			7-3/8	9-5/8
KMABA04014TE			7-1/2	10
KMABA05013TE			7-3/8	9-5/8
KMABA06014TE			7-1/2	10

KMABA SPECIFICATIONS

BLOWER MODEL	01013TG	02014TG	03013TE	04014TE	05013TE	06014TE
Shipping Weight (Lb)	30	38	33	39	35	41
ELECTRICAL						
Volts—Phase	115/1	115/1	208–230/1	208–230/1	208–230/1	208–230/1
Operating Voltage Range	104–127	104–127	187–253	187–253	187–253	187–253
Full Load Amps	7.20	9.00	3.00	4.30	3.00	4.30
BLOWER MOTOR						
Motor Hp (PSC)	1/2	1/2	1/2	3/4	1/2	3/4
RPM—Speeds	1075/3					
Blower Type	Direct Drive					
BLOWER WHEEL						
Diameter (In.)	10-1/2	11-1/2	10-1/2	11-1/2	10-1/2	11-1/2
Width (In.)	8					
Air Discharge	Downflow					
Maximum Cooling Capacity	3 Ton	4 Ton	3 Ton	4 Ton	3 Ton	4 Ton
ACCESSORIES						
Control Box Kit	KMACC02014WG		KMACC0401E14		KMACC0601FE4	
Filter Kit	N/A		KMAFK0101NFK			
Insulation Kit	N/A		KMAIK0101E1I		N/A	
Coil Shelf Kit	N/A				KMACR0101CRI	

NOTE: Refer to Accessory Usage chart for exact kit application.

N/A—Not applicable

PERFORMANCE DATA

GROSS COOLING CAPACITIES (MBH)

INDOOR COIL AIR		SATURATED TEMPERATURE LEAVING EVAPORATOR (°F)														
		30			35			40			45			50		
CFM	EWB (°F)	TCG	SHG	BF	TCG	SHG	BF	TCG	SHG	BF	TCG	SHG	BF	TCG	SHG	BF
CM5A/CM5B024																
600	72	50.4	24.2	0.00	45.8	21.8	0.00	40.9	19.4	0.00	35.3	16.9	0.09	28.8	14.3	0.06
	67	41.5	24.8	0.08	37.0	22.4	0.06	32.0	19.9	0.05	26.2	17.3	0.05	19.9	14.7	0.06
	62	33.7	25.4	0.05	29.1	22.9	0.05	24.1	20.4	0.06	18.5	17.5	0.08	14.8	14.8	0.19
800	72	61.9	29.4	0.00	56.7	26.8	0.00	50.8	24.1	0.00	44.0	21.1	0.11	36.0	17.9	0.08
	67	51.6	30.9	0.10	46.2	28.1	0.08	39.9	25.1	0.07	32.7	22.0	0.07	24.9	18.7	0.08
	62	42.1	32.1	0.07	36.4	29.1	0.07	30.1	26.0	0.08	23.2	22.4	0.11	19.0	19.0	0.22
1000	72	71.5	33.8	0.00	65.4	30.9	0.00	58.6	27.8	0.00	51.1	24.7	0.12	42.2	21.2	0.10
	67	59.7	36.0	0.12	53.7	33.0	0.10	46.7	29.8	0.09	38.4	26.2	0.09	29.2	22.3	0.10
	62	49.2	38.1	0.09	42.7	34.7	0.09	35.4	31.1	0.10	27.6	26.9	0.13	22.9	22.9	0.25
CM5A/CM5B036																
1000	72	74.8	35.4	0.00	68.7	32.5	0.00	61.7	29.3	0.00	54.0	26.1	0.11	44.8	22.5	0.09
	67	62.6	37.7	0.10	56.4	34.7	0.09	49.2	31.4	0.08	40.8	27.7	0.07	31.3	23.7	0.09
	62	51.3	39.7	0.08	44.7	36.3	0.08	37.5	32.7	0.09	29.1	28.3	0.12	23.9	23.9	0.24
1200	72	83.4	39.4	0.00	76.9	36.3	0.00	69.2	33.0	0.19	60.4	29.4	0.12	50.5	25.6	0.10
	67	70.1	42.6	0.11	63.1	39.3	0.10	55.3	35.7	0.09	46.2	31.8	0.09	35.7	27.4	0.10
	62	57.6	45.4	0.09	50.5	41.8	0.09	42.5	37.8	0.10	33.4	32.8	0.14	27.8	27.8	0.26
1400	72	90.6	42.8	0.00	83.6	39.7	0.00	75.5	36.2	0.17	65.9	32.4	0.13	55.4	28.4	0.12
	67	76.3	46.9	0.12	68.9	43.5	0.11	60.3	39.6	0.11	50.8	35.6	0.10	39.6	30.9	0.12
	62	62.9	50.5	0.10	55.4	46.7	0.11	46.9	42.5	0.12	37.4	37.1	0.16	31.5	31.5	0.29
CM5A/CM5B042																
1000	72	77.4	36.7	0.00	71.5	33.8	0.00	64.7	30.7	0.00	56.8	27.4	0.11	47.8	23.8	0.08
	67	65.2	39.2	0.09	59.0	36.1	0.08	51.6	32.7	0.07	43.3	29.0	0.06	33.6	25.0	0.07
	62	54.2	41.6	0.07	47.4	38.1	0.07	39.9	34.4	0.07	31.2	29.9	0.09	25.5	25.5	0.21
1200	72	85.9	40.6	0.00	79.8	37.7	0.00	72.1	34.4	0.20	63.3	30.7	0.11	53.6	27.0	0.10
	67	72.8	44.2	0.10	65.5	40.7	0.09	57.9	37.2	0.09	48.9	33.3	0.08	38.2	28.8	0.09
	62	60.4	47.2	0.08	53.3	43.7	0.08	45.1	39.6	0.09	35.7	34.7	0.11	29.7	29.7	0.23
1400	72	93.1	44.0	0.00	86.6	41.1	0.00	78.5	37.6	0.16	69.1	33.9	0.12	58.5	29.8	0.11
	67	79.0	48.5	0.11	71.5	45.0	0.10	63.1	41.2	0.10	53.6	37.2	0.09	42.3	32.5	0.10
	62	65.7	52.4	0.09	58.1	48.7	0.10	49.6	44.4	0.10	39.9	39.2	0.13	33.6	33.6	0.25
CM5A/CM5B048																
1200	72	86.4	40.9	0.00	79.2	37.4	0.00	71.2	33.8	0.00	62.0	29.9	0.11	51.3	25.7	0.09
	67	72.3	43.5	0.11	64.9	39.8	0.09	56.5	35.8	0.08	46.7	31.5	0.07	36.0	27.1	0.09
	62	59.6	45.8	0.08	51.5	41.6	0.08	42.7	37.2	0.09	34.2	32.8	0.11	28.6	28.6	0.20
1400	72	94.5	44.6	0.00	86.8	40.9	0.00	77.8	37.0	0.00	68.0	33.0	0.14	56.6	28.5	0.12
	67	79.1	47.8	0.13	71.2	44.0	0.12	62.1	39.8	0.11	51.6	35.2	0.10	39.8	30.3	0.11
	62	65.1	50.6	0.10	56.9	46.5	0.10	47.4	41.8	0.11	38.3	37.2	0.12	32.4	32.4	0.22
1600	72	101.0	47.6	0.00	93.1	43.9	0.00	83.7	39.9	0.00	73.1	35.6	0.16	61.2	31.0	0.14
	67	84.9	51.6	0.15	76.3	47.5	0.14	67.0	43.3	0.13	55.9	38.6	0.12	43.2	33.4	0.13
	62	70.0	55.1	0.12	61.5	50.9	0.12	51.5	46.0	0.13	42.4	41.6	0.14	36.0	36.0	0.25

BF — Bypass Factor

CFM — Cubic Ft per Minute

EWB — Entering Wet Bulb (°F)

SHG — Gross Sensible Capacity 1000 Btuh

TCG — Gross Cooling Capacity 1000 Btuh

3. Direct interpolation is permissible. Do not extrapolate.

4. SHC is based on 80°F db temperature of air entering coil.

Below 80°F db, subtract (Correction Factor x CFM)

from SHC. Above 80°F db, add (Correction Factor x CFM) to SHC

5. All data points are based on 10°F superheat leaving coil.

SHC CORRECTION FACTOR

BYPASS FACTOR	ENTERING AIR DRY-BULB TEMPERATURE (°F)					
	79	78	77	76	75	Under 75
	81	82	83	84	85	Over 85
Correction Factor						
0.10	0.98	1.96	2.94	3.92	4.91	Use formula shown below.
0.20	0.87	1.74	2.62	3.49	4.36	
0.30	0.76	1.53	2.29	3.05	3.82	

Interpolation is permissible.

Correction Factor = $1.09 \times (1 - BF) \times (db - 80)$

NOTES:

1. Contact manufacturer for cooling capacities at conditions other than shown in table.

2. Formulas:

$$\text{Leaving db} = \text{entering db} - \frac{\text{sensible heat cap.}}{1.09 \times \text{CFM}}$$

Leaving wb = wb corresponding to enthalpy of air leaving coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{CFM}}$$

where h_{ewb} = enthalpy of air entering coil.

COIL STATIC PRESSURE DROP (IN. WC)

UNIT SIZE	BULB	AIR QUANTITY (CFM)				
024	WET DRY	600	700	800	900	1000
		0.11	0.14	0.19	0.23	0.27
		0.09	0.12	0.15	0.19	0.22
036	WET DRY	1000	1100	1200	1300	1400
		0.22	0.28	0.32	0.37	0.42
		0.19	0.23	0.27	0.31	0.36
042	WET DRY	1100	1200	1300	1400	1500
		0.24	0.28	0.32	0.38	0.43
		0.20	0.24	0.29	0.33	0.39
048	WET DRY	1200	1300	1400	1500	1600
		0.30	0.35	0.40	0.45	0.51
		0.27	0.29	0.33	0.38	0.43

ACCESSORY USAGE

ACCESSORY KIT NO.	USED WITH											
	Evcon/Coleman/AirPro				Nordyne/Miller/Intertherm							
	Gas Furnaces		Electric Furnaces		Gas Furnaces				Electric Furnaces			
	DGRT—A 7900	DGRT—B DGAT	3400 3400A 3500A8—	EB—B	MGHA	MGBA	MGBB	MGHB	E1EB	E1EH	FEBA FEBB	FEH2 FEHB
BLOWER PACKAGES												
KMABA01013TG	X*	X†	—	—	X	—	—	X†	—	—	—	—
KMABA02014TG	X*	X‡	—	—	X	X‡	X‡	X‡	—	—	—	—
KMABA03013TE	—	—	—	—	—	—	—	—	—	X**	—	—
KMABA04014TE	—	—	—	—	—	—	—	—	—	X**	—	—
KMABA05013TE	—	—	X**	—	—	—	—	—	—	—	X**	X**
KMABA06014TE	—	—	X**	—	—	—	—	—	—	—	X**	X**
CONTROL BOXES												
KMACC02014WG	X	—	—	—	X	X	—	—	—	—	—	—
KMACC0401E14	—	—	—	—	—	—	—	—	—	X††	—	—
KMACC0601FE4	—	—	—	—	—	—	—	—	—	—	X††	X††
FILTER KIT												
KMAFK0101NFK	—	—	—	—	—	—	—	—	X	X	X	X
INSULATION KITS												
KMAIK0101E1I	—	—	—	—	—	—	—	—	X	X	—	—
COIL SHELF KIT												
KMACR0101CRI	—	—	X	X	—	—	—	—	—	—	—	—

* Requires additional control box kit.

† Only required on high static 3-ton applications.

‡ Only required on 3-1/2-ton and 4-ton applications.

** Blower package comes with necessary control box. Additional control box kit not required.

†† Only required if using existing furnace blower.

X—Indicates recommended use of product.

SERVICE TRAINING

Packaged Service Training programs are an excellent way to increase your knowledge of the equipment discussed in this manual, including:

- Unit Familiarization
- Maintenance
- Installation Overview
- Operating Sequence

A large selection of product, theory, and skills programs is available, using popular video-based formats and materials. All include video and/or slides, plus companion book.

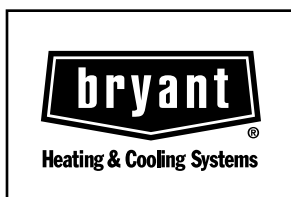
Classroom Service Training plus "hands-on" the products in our labs can mean increased confidence that really pays dividends in faster troubleshooting, fewer callbacks. Course descriptions and schedules are in our catalog.

CALL FOR FREE CATALOG 1-800-962-9212

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE
WITH INSTALLATION INSTRUCTIONS

Cancels: PDS CM5A.24.1